

Regt., serving under Lord Napier; on the 1st of August, 1862, he transferred to the 62nd Foot Regt., being made Lieutenant on the 24th of November, 1863, and promoted to Captain on the 7th of February, 1876. He left the service in 1881, after serving over fifteen years in India, and lived on retirement at East Wickham House, Welling, Kent, moving to Wimbledon Park in 1916.

For many years he came to the Bird Room at the Natural History Museum and made most careful and excellent drawings and sketches of birds with their natural surroundings.

He worked through every species of the Game Birds and the Ducks, and at the time of his death was engaged on the Corvidæ. We hear that his drawings have all been left to the Zoological Society. Major Jones was elected a member of the Union in 1900.

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#### XIX.—*Notices of recent Ornithological Publications.*

##### *Bartsch on the Birds of the Tortugas.*

[The Bird-rookeries of the Tortugas. By Paul Bartsch. Smithsonian Report for 1917, pp. 469-500, 38 pls. Published 1919.]

The Tortugas are the last of the long line of coral reefs and islands which string out in a westerly direction from the southern extremity of Florida into the Gulf of Mexico, and have long been renowned for the numbers of sea-birds visiting and breeding on them. The first ornithologist who visited them was J. J. Audubon in 1832. He has given us a most vivid account of his observations and experiences in his *Ornithological Biography*, portions of which are reprinted in the present paper. On one of the islands, Loggerhead Key, is the Marine Biological Laboratory of the Carnegie Institution, at which most of the recent work on birds, especially that of Messrs. Watson and Lashley (*vide Ibis*, 1916, p. 191), has been conducted. The most interesting island of the group is Bird Key, where, out of

32,800 birds listed in a census made in 1916, some 31,200 have their homes and breeding-grounds.

Far the most numerous in individuals are the Sooty Tern (*Sterna fuscata*) and the Noddy (*Anous stolidus*); others of less importance as regards numbers are the Least Tern (*Sterna a. antillarum*), the Roseate (*S. dougalli*), the Man-o'-War Bird (*Fregata magnificens rothschildi*), and the Boobies (*Sula leucogastris* and *S. sula*), but the last three do not nest.

Good accounts of all these species are given by Dr. Bartsch in the present paper, which is illustrated by a large number of photographs. There is also an interesting list of all the birds which have been recorded from the islands, as well as of the land-birds which have been observed there on different occasions on migration.

*Chapman on variation in Ostinops decumanus.*

[Unusual types of apparent geographic variation in colour and of individual variation in size exhibited by *Ostinops decumanus*. By Frank M. Chapman. Proc. Biol. Soc. Washington, vol. xxxiii. 1920, pp. 25-32.]

Mr. Chapman has recently examined a large series of examples of *Ostinops decumanus*, chiefly from southern Peru and Bolivia, and also from Matto Grosso in south-west Brazil, and he finds among these birds, both male and female, a remarkable phenomenon of a varying number of feathers of the body and wing-coverts being wholly or in part yellow or more rarely white. Such a variation, if found in a single individual, would certainly be considered as pathological albinism or xanthochroism. But this curious variation is found to a variable extent in so large a proportion of the birds examined that it must be considered a diagnostic character, and to draw attention to it Mr. Chapman proposes to distinguish this form as a distinct subspecies, *Ostinops decumanus maculosus*. In birds from north of the Amazon valley this variation does not occur.

In regard to size, Mr. Chapman finds a very remarkable variation among the males only—both those from the northern and southern parts of South America.

The wings of seven birds from Matto Grosso vary from 205 to 239 mm., while in a series of five males from Colombia the variation ranges from 228 to 249 mm., and the shape of the wing as shown in a text-figure is very different in the two extreme cases. Mr. Chapman believes that the short-winged individuals are young birds in their first winter, and that as they grow older the wings, as well as the tail and culmen, increase in length. *Ostinops decumanus* is certainly a species of considerable interest, and deserves further study.

*Christiani on a new Rock-Pipit.*

[Den vestnorske Skærpiber (*Anthus petrosus schiøleri*, subsp. nov.). Af A. Christiani. Dausk. Ornith. Forenings Tidsskrift, 1920, pp. 157-162.]

Mr. Christiani here describes a new subspecies of Rock-Pipit, *Anthus petrosus schiøleri*, from western Norway. The types are from Florø Island near Trondhjem, and Skaer-gaaden near Bergen. The chief distinguishing character is apparently a slight colour-difference in the vinous of the chest. In a further note on the Faroe Island form, *A. p. kleinschmidti*, described by Dr. Hartert, Mr. Christiani states that the first observer who pointed out its peculiarities was J. C. H. Fischer (Journ. Ornith. 1861, p. 432), and not Pastor Kleinschmidt as stated by Hartert.

*Coward on British Birds.*

[The Birds of the British Isles and their Eggs. By T. A. Coward. Second Series. Pp. vii + 576; 213 col. pls.; 69 photographic illustr. London & New York (Warne), 1920.]

The second and concluding portion of this little book, which is one of Warne's 'Wayside and Woodland' series, is hardly up to the level of the first volume (*cf.* Ibis, April 1920). This is, however, chiefly due to the nature of the subject-matter, and not to any lack of skill in the author. The families treated are those from the Anatidæ to the Tetraonidæ, and it is easy to understand that few persons can visit the breeding-haunts of every species, or write with

that full knowledge of the habits which was so conspicuous in Mr. Coward's treatment of such groups as the Warblers. But the coloration of the eggs leaves much to be desired, and in the case of certain of the Ducks is absolutely misleading: for instance, the Gadwall's egg is cream-coloured, not green. The reproductions of Lord Lilford's plates are wonderful for a book of this price; the black plates are good, but somewhat ordinary, while only the publisher can tell whether they are necessary to the sale of the volumes. We should have omitted them and used them elsewhere.

*Howard on Territory in Bird Life.*

[Territory in Bird Life. By H. Eliot Howard. Pp. xiv+308; 11 photogravures by Lodge and Grönvold. London (John Murray), 1920. 8vo. 21s. net.]

As a result of long-continued observation in the field on the breeding-habits of British Warblers, Mr. H. Eliot Howard has gradually come to realize the immense importance of the possession of territory to the male, and its influence on his life and actions. In the present attractive and thoughtful little work he has extended his studies to other families, and finds that the same general principles hold good.

It is obvious that no species can breed unless it has undisputed possession of a nesting-site of some kind, however restricted, and to this extent every bird requires what we may agree to call territory. But among the Warblers the term includes, not merely the nesting-place, but a more or less extensive reserve, which serves as a station from which the song is uttered to attract a mate, and the hunting-ground or source of food-supply, the limits of which are rarely transgressed by the parents during the whole period of reproduction. On the other hand, among the Auks we find the Guillemot occupying, to use Mr. Howard's words, "a few square feet of rock only" for breeding-purposes. On the pinnales at the Farne Islands it would be more correct to say that the breeding space

covers a few square inches only, so that the isolation of the breeding pair is more theoretical than practical.

Mr. Howard ascribes the restricted nature of the Guillemot's territory to the fact that the species, as a whole, would suffer if each male resisted intrusion on its breeding-ledge, owing to the scanty number of available sites, while, on the other hand, the food-supply is practically unlimited. The explanation seems adequate in this case, but is less convincing when we come to consider the difference between the breeding-habits of the Raven and Rook. The former requires not merely a home, but also an estate surrounding it, on which he brooks no rival; the latter is content to live in a bird-town in the tree-top, from where he sallies forth with his companions to seek his living on communal ground. Here shortage of nesting-sites cannot be urged as the reason for such close association, nor is there any advantage gained with regard to food-supplies, so mutual protection is assigned as the necessary condition of the Rook's existence. Now it is quite true that many cases are on record of rookeries being raided by Carrion Crows, but no serious resistance seems ever to be made by the Rooks, and no combined action taken by the members of the colony in opposition to the raiders. This is the more remarkable, when it is remembered that such species as the Common and Arctic Terns, though far weaker as individuals, when acting in concert, can drive off not only the Hooded or Carrion Crow, but even the Marsh-Harrier. Another instance where communal breeding is practically useless for purposes of defence, is that of the Cormorant. The parent birds of one nest will view with absolute indifference the robbery of another nest only a few feet away by Crow or Gull. In these cases the difference in the territorial idea is much more than merely of degree. One might almost say that among birds, even in the same families, there are individualists and socialists,—and we may take the Rook, the Martins, the Terns, and the Guillemot, as examples of the latter class; while the Warblers, the Falcons, the Pipits,

Shrikes, and many other families may be quoted as belonging to the former. Some of the communal breeders have also adopted a system of communal defence (more especially the Terns), but with others nothing of the kind has yet been evolved.

We think a truer idea of Territory in Bird Life would be gained by eliminating the actual nesting-site, which is, of course, a necessity in every case, and restricting the use of the word to the area embraced by the activities of the parents. We shall then find that in some groups all other individuals of the same species are rigidly driven off the whole territory, in others the idea is only present in a rudimentary form, and in a third class the association is of the closest kind and individual territory is unknown.

There is also a wide field for research, untouched in the present work, on the occasional unresented presence of a third individual together with a pair in the case of a normally monogamous species. Probably this has been noted most frequently in the case of the Long-tailed Tit, but there are recorded instances in some twelve or fourteen other species at least. We are grateful to Mr. Howard for his beautifully illustrated and thoughtful study on an aspect of bird-life, which by his researches he has undoubtedly done much to elucidate.—F. C. R. JOURDAIN.

*Hellmayr's recent papers on Neotropical Birds.*

[Ein Beitrag zur Ornithologie von Südost-Peru. Von C. E. Hellmayr. Arch. Naturgesch. Jahrg. 85, Abt. A, 1920, pp. 1-131.]

[Miscellanea Ornithologica, V. Id. Verhandl. Orn. Ges. Bayern, xiv. 1920, pp. 281-287.]

The first of these papers contains an account of the more interesting forms contained in a collection made by the brothers H. and C. Watkins in the Department of Puno in south-eastern Peru, near the Bolivian border. These collections reached Europe before the outbreak of the war, and are now preserved, partly in the Munich Museum, partly in the private collection of Count Josef Seilern.

They contained about 12,000 skins, representing 250 species. Some of the new forms have been already described, while four additional ones are here introduced for the first time, viz.:—*Cyanerpes cerulea chocoana* from Colombia, *Rhamphocelus carbo centralis* from Brazil, *Spizitornis parulus patagonicus* from Argentina, and *Lepidocolaptes lacrymiger carabayæ* from S.E. Peru. Very valuable comments on nomenclature and geographical distribution, together with revisions of various groups of subspecific forms, make up the rest of the paper, which is one of the most important contributions to our knowledge of the avifauna of the eastern slopes of the Peruvian Andes which has appeared for some time.

The second paper, which also deals solely with neotropical forms, contains revisions of nomenclature and synonymy. A note on the first record of *Helminthophila leucobronchialis* in South America is of considerable interest, as this rare little Warbler is believed by Mr. Faxon and other North American naturalists to be a natural hybrid between *H. pinus* and *H. chrysoptera*. The South American example was obtained near Merida in Venezuela, and is now in the Tring Museum.

#### *Laubmann on Lesson's Types.*

[Kritische Untersuchungen über die Genotypfixierungen in Lesson's 'Manuel d'Ornithologie,' 1828. Von Dr. A. Laubmann. Arch. Naturgesch. Jahrg. 85, Abt. A, 1920, pp. 137-168.]

In this laborious but useful work Dr. Laubmann has carefully reviewed all the genera in Lesson's 'Manuel d'Ornithologie,' and has shown that in many cases Lesson, quite in accordance with the modern rules of Zoological nomenclature, fixed the types of a good many genera where the fixation has generally been attributed to Gray, whose work was published later. This paper should be carefully consulted by all who are interested in nomenclatural work.

*Lavauden on Tunisian Birds.*

[La chasse et la faune cynégétique en Tunisie. Par Louis Lavauden. Pp. 1-40. Tunis (Imprim. centr.), 1920. 8vo.]

[Contribution à l'étude des formes du Hibou Ascalaphe dans l'Afrique du Nord. Id. Rev. Franç. d'Orn. 1920, nos. 132-3, pp. 1-8 (separately paged).]

In the first of these pamphlets M. Lavauden, who is an Inspector of Forests in the Regency of Tunis, gives us a useful review of the Mammalian and Avian fauna of Tunisia, chiefly from the sportsman's point of view. The birds of Tunisia have been dealt with by Mr. Whitaker in his well-known work; but no volume in French has yet been published, and we hope that M. Lavauden will find time before he leaves the country to prepare one. We understand that he has already completed a work on the Mammals, which unfortunately is yet awaiting a publisher. The most interesting bird likely to be noticed by the casual visitor to Tunisia is undoubtedly the Flamingo, which is always to be seen on the great lake which separates Tunis from the sea, though it is not known to breed there. M. Lavauden, however, has reason to believe that it nests in a lake in the southern part of the Regency between Sousse and Kairouan.

The pamphlet also contains the official regulations in regard to the importation of arms, and the closed and open seasons for shooting. We are glad to notice that the Flamingo and some of the other rarer birds and mammals are strictly preserved.

In the second paper M. Lavauden discusses the Eagle-Owls of Tunisia. He points out that there is at present no certain evidence of the occurrence in Tunisia of *Bubo bubo* in any of its immediate subspecies, though it is said to have occurred in Algeria. On the other hand, there are two forms of the Egyptian Eagle-Owl, *Bubo ascalaphus* and *B. a. desertorum*. These two forms appear to be quite distinct: the former occurring, though rarely, in the north of Algeria and Tunisia; the latter, which has



been met with far more frequently, inhabiting southern and drier parts of the country.

*McGregor on Philippine Birds.*

[Some features of the Philippine Ornis, with notes on the vegetation in relation to the Avifauna. By Richard C. McGregor. *Philippine Journ. Sci.* vol. xvi. 1920, pp. 361-437, map and 34 pls.]

For a good many years past Mr. McGregor has been stationed at Manilla, where he occupies the position of Ornithologist in the Bureau of Science. He has had many opportunities of adding to our knowledge of the birds of the Philippine Islands, and in the present essay he deals with them chiefly from the ecological and geographical aspect. After noticing the great scarcity of sea-birds in the Philippine waters and the comparative absence of native birds about the town of Manilla, where the two commonest species are the European Tree-Sparrow and Chinese Crested Minah (*Aethiopsar cristatellus*), he points out how the whole aspect of the low country has been changed by the destruction of the virgin forest which formerly covered it, and how most of the indigenous endemic birds are found in the forest-regions that remain, chiefly in the mountainous areas.

He then discusses the various types of forest, from the mangroves of the tide-lands to the pine and the mossy types which cover the higher parts of the islands at from 2000 to 4000 feet, and comments on the birds which characterize each type of forest.

Most of the more interesting Philippine birds inhabit the Dipterocarp type of forest, so-called from its most conspicuous and valuable constituent "*Dipterocarpus*." The forests are best developed on the well-watered plains or the lower slopes of the larger mountains, generally below 5000 feet.

A further discussion deals with the local distribution of the endemic species among the various islands of the Archipelago. Most of the species are confined to single islands or groups of islands, and are represented by allied

forms in other groups of islands ; but this is by no means always the case, and there are many instances of comparatively closely allied species being found together even in the same patch of forest. Finally, a revised list of the faunal regions into which the islands can be most conveniently arranged, is given.

A map and a number of photographs of characteristic scenery in the islands agreeably assist one to follow the facts and arguments put forward in the paper, which is one of very considerable importance, and should be studied by all interested in the problems of the distribution of birds in tropical lands.

*Mathews on Australian Birds.*

[The Birds of Australia. By Gregory M. Mathews. Vol. viii. pt. 5, pp. 241-316, pls. 395-399. London (Witherby), December 15th, 1920.]

This part, which concludes the volume, gives us an unusually simple task, as it contains only various Pachycephaline forms now separated in the genera given below.

First, we have the conclusion of *Lewinornis rufiventris*, to which many a generic name was given of old, not without reason, as it shows a certain affinity to *Colluricincla*. Only one species is allowed, the others being reduced to nine subspecies, of which *dulcior* of North Queensland, *gawlerensis* of South Australia, and *waddelli* from the same country are new. *Gilbertornis* has two species—*rufogularis*, which is said to have a peculiar note, and *inornatus*, which is proved to be the proper appellation of *gilbertii*, with its three subspecies. The robust *Alisterornis lanioides* was considered worthy of specific rank, even by Gould ; its range lies to the northward and it has a curious habit of feeding on small crabs. There are four subspecies. *Timixos olivaceus*, with one less, is followed by *Mattingleya griseiceps*, which is the *Eopsaltria inornata* of Ramsay and almost certainly *Pachycephala peninsulae* of Hartert. *Muscitrea simplex*, which is said to be synonymous with *Tephrodornis grisola* of Blyth, has two subspecies, which are certainly different from the extralimital form.

The only new genus in this part of the work is *Peneteanthe*, where the tail resembles that of a Wheatear. The species *leucura* has six or seven subspecies, according to whether we include Salvadori's *pulverulenta* of New Guinea or not. *Quoyornis georgianus* has three races, *Eopsaltria australis* six. The latter, first figured by White in 1790, was given no less than three different names by Latham, and has had other synonyms, as will be seen from the text. A second species, *E. griseogularis*, has four subspecies, of which *wongani* and *quoyi*, both from Western Australia, are new.

Attention should be drawn to two pages of corrections of the Check-List printed in this part.

*Mathews on the dates of ornithological publications.*

[Dates of ornithological works. By Gregory M. Mathews. Austral Av. Record, iv. 1920, pp. 1-27.]

In Appendix B of the last part of volume vii. of 'The Birds of Australia' Mr. Mathews attempted to provide a list of the exact dates of publication of the ornithological works quoted by him. Though a good many investigations into this difficult bibliographical question have been made, especially by Mr. Sherborn and Mr. Waterhouse, no one has collected their results into one place easily accessible to the working ornithologist, and now Mr. Mathews has reprinted with additions and corrections this valuable piece of research in a more accessible form.

The publications dealt with are primarily those in which the Australian birds are described; but the list will undoubtedly be of the greatest use and service to all systematic ornithologists, and we would tender our best thanks to Mr. Mathews for this excellent and laborious piece of work.

*Murphy on the Sea-birds of Peru.*

[The sea-coast and islands of Peru. Pts. I., II., & III. By Robert Cushman Murphy. Brooklyn Museum Quarterly, vii. 1920, pp. 69-95, 165-187, 239-272.]

In these three articles, and there appear to be more to

follow, Mr. Murphy, Curator of the Brooklyn Museum in New York, gives us an account of his recent visit to Peru and its bird-islands, which he terms the Peruvian Littoral Expedition, and which he was enabled to undertake through the generous bequest of the late Col. R. B. Woodward, a benefactor of the Brooklyn Museum. The chief objects of the expedition were observation and research, the collecting of specimens, and the obtaining of motion-picture records of the life on the coast and of the Peruvian guano industry.

As is well known, owing to the cold Humboldt current which, partly coming up from the southern latitudes, and partly owing to the welling-up of colder water from below the surface, due to the trade winds blowing south of the equator in a north-westerly direction, the coasts of Peru have a fauna which is quite unlike that of ordinary tropical coasts, and instead of Frigate-birds and Man-o'-War birds, the characteristic birds are Penguins, Diving Petrels (*Pelecanoides*), and *Larus dominicanus*. In addition to this, owing to the fact that the great height of the Andes, extending like a gigantic cliff along the whole western coast of South America, drain the trade winds blowing across the continent from the Atlantic of all their moisture, the coastlands of Peru and the northern part of Chile are almost entirely rainless; the result is that the guano deposited on the islands off the coasts by the innumerable sea-birds accumulates in great quantities, and has been a source of wealth to Peru for the last hundred years or so.

In past times the guano deposits have been worked in a most reckless manner and were rapidly becoming exhausted, while no efforts were made to conserve the bird-life to which this valuable manuring agent owed its origin.

Of recent years, however, a new regime has been inaugurated, and the whole industry is under the control of the government and of a company, the "Compañía Administradora del Guano," and very careful steps are taken to work the deposits without unduly disturbing the birds.

It is interesting to observe that on the south-west coasts of Africa, where conditions are very similar, the same course has been adopted, though there the control of the islands is directly under the government of the Union of South Africa.

The three most important guano-producing birds are the Alcatraz (*Pelecanus thagus*), the Piquero (*Sula variegata*), and the Camanay (*Sula nebouxi*). Of these, and of the methods and operations of obtaining the guano, Mr. Murphy has given a most lucid account illustrated by numerous and beautifully reproduced photographs, and the articles are well worthy of perusal by all those interested in the industrial application of ornithology.

To his two predecessors in the investigation of the guano islands, Dr. H. O. Forbes and Mr. R. E. Coker, of the United States Bureau of Fisheries, Mr. Murphy pays a well-deserved tribute. An interesting discovery is that these seas are the winter home of the Northern or Red-necked Phalarope (*Phalaropus lobatus*); its winter quarters in the New World had been hitherto unknown.

#### *Peters on a new Jay.*

[A new Jay from Alberta. By James Lee Peters. Proc. New England Zool. Cl. vii. 1920, pp. 51-52.]

Mr. Peters describes *Perisoreus canadensis albescens* as a distinct race from Red Deer, Alberta, Canada. It is distinguished from all the other races of the Canada Jay by its much paler coloration. The type is in the Museum of Comparative Zoölogy at Cambridge, Mass.

#### *Ridgway on new Genera of Birds.*

[Diagnoses of some new Genera of Birds. By Robert Ridgway. Smithson. Miscel. Coll. Washington, vol. lxxii, no. 4, 1920, pp. 1-4.]

The following new Genera of Hawks and Rails are proposed, no doubt in anticipation of a forthcoming volume of the 'Birds of North and Middle America':—*Oroaëtus* for type *Spizaëtus isidori* (Vieill.); *Phæoaëtus* for type

*Spizaetus limnaetus* (Horsf.) (*Limnaetus* Vigors, a synonym, is antedated by *Limnæetus* Bowdich, the latter a synonym of *Buteo*); *Morphnarchus* for type *Leucopternis princeps* Scl.; *Percnohierax* for type *Rupornis leucorrhous* (Q. & G.); *Hapalocrex* for type *Rallus flaviventris* Bodd.; *Limnocrex* for type *Porzana cinereiceps* Lawrence; *Thryocrex* for type *Corethrura rubra* Scl. & Salv.

*Riley on new Malayan Birds.*

[Four new Birds from the Philippines and Greater Sunda Islands. By J. H. Riley. Proc. Biol. Soc. Washington, vol. xxxiii. 1920, pp. 55-58.]

Mr. Riley describes as new from Mr. Raven's collection the following:—*Anthreptes malacensis paraguæ* from Palawan, *A. m. bornensis* from Borneo, *Enodes erythrophrys centralis* from Celebes, and *Munia punctulata particeps* also from Celebes.

*Robinson and Kloss on the names of the Jungle-Fowls.*

[On the proper name of the Red Jungle-Fowl from Peninsular India. By H. C. Robinson and C. Boden Kloss. Records Indian Mus. xix. pt. 1, 1920, pp. 13-15.]

The nomenclature of the Indian Red Jungle-Fowl has been discussed lately by several writers. Messrs. Robinson and Kloss consider that the correct specific name is *Gallus ferrugineus* (Gmel.), founded on Sonnerat's bird, probably from the Philippine Islands, as he visited no area in India proper where he could have procured the Red Jungle-Fowl, and that the typical subspecies *G. f. ferrugineus* is the Malayan bird also occurring in Burma and Hainan. To the Javan race, which is distinguished by the dark colour of the hackles, the authors assign the name *G. f. bankiva* Temm., while the bird of India proper has to receive a new name. For this form *Gallus ferrugineus murghi* is proposed, the subspecific name being apparently derived from the common Hindustani word for a chicken, familiar to every Anglo-Indian.

*Skovgaard on Danish Birds.*

[Den Sorte Stork, særlig i Danmark. i tekst og billeder af P. Skovgaard. Pp. 1-56; many photographs. Viborg (Backhausens), 1920. 8vo.]

[Danske-Fugle: Organ for Dansk Ornithologisk Central ved P. Skovgaard. Viborg. Aarg. 1, no. 1, 1920.]

The first of these publications contains an account of the life-history of the Black Stork (*Ciconia nigra*) in Denmark. There is a map showing the breeding-stations, from which it appears that it is most abundant in the eastern half of Jutland, less so in the islands, and is hardly found at all in the western half of the peninsula. It arrives at its breeding-places generally in April, though occasionally in March, and leaves as a rule in August or early September. The paper is illustrated with a number of very fine photographs, all taken by the author himself.

The second publication is a new magazine devoted to Danish Birds, though the whole of the articles are apparently from the pen of Mr. Skovgaard. One of these deals with the food of the White Stork as deduced from an examination of the stomach. Another has an account of Mr. Skovgaard's activities in bird-ringing, and there is also a list of a collection of Danish birds belonging to Mr. C. Reimers of Viborg, with a map and some photographs of the rarer species.

We congratulate Mr. Skovgaard on his industry and hope that he will be able to continue his studies, and that his magazine will have a long life.

*Stresemann on the races of Long-tailed Tits and Bullfinches.*

[Über die Formen der Gruppe *Aegithalos caudatus* und ihre Kreuzungen. Über die europäischen Gimpel (mit einer Kart ihrer Verbreitung). Von Erwin Stresemann. Beiträge zur Zoogeographie der paläarktischen Region. Herausgegeben von der Ornith. Gesellsch. in Bayern. Heft 1, 1919, pp. 1-56.]

In the first of these essays Dr. Stresemann reviews the very variable group of the Long-tailed Tits, among which

he distinguishes fourteen races spread over the Palæarctic Region. He divides these fourteen races into three groups, and he believes that when individuals belonging to different groups extend their range towards one another's territory hybridization occurs, and that such hybrids follow the Mendelian laws. Also that in some cases pure-blooded individuals revert to the more primitive types from which they are sprung, and that a clear distinction should be drawn between them and the hybrids. By means of these hypotheses he endeavours to account for the many varying forms of Long-tailed Tits met with in the Palæarctic Region.

With regard to the Bullfinches the problem appears more simple, but here, too, the explanation is hybridization between two comparatively distinct forms. The larger, *Pyrrhula p. pyrrhula*, of the east and north, and the smaller, *Pyrrhula p. minor* and *P. p. pileata*, of the west, have spread out since the Ice Age and met in southern Germany, where a mixed or hybrid form, known as *P. p. germanica*, has established itself. Such in brief appears to be the views of our author on these difficult and complicated questions.

#### *Bird-Lore.*

[Bird-Lore: A bi-monthly Magazine devoted to the Study and Protection of Birds. Vols. xxi. & xxii. for 1919 & 1920.]

The two volumes of 'Bird-Lore' under notice contain a number of articles of considerable interest, especially to the bird-lover in America, to whom they are specially addressed. We must confine ourselves to mentioning some of those of more general interest. The Editor, Mr. Frank Chapman, during the last part of the war was a travelling commissioner for the American Red Cross and, in that capacity, made a rapid journey through South America, visiting Peru, Chile, and the Argentjue. His impressions on the bird-life of those countries will be found in a series of vivid articles illustrated with photographs and drawings. Perhaps



one of the most remarkable is that of a Giant Hummingbird (*Patagona gigas*) capturing on the wing a common small species (*Eustephanus galeritus*), a sight which he witnessed in the foot-hills of the Andes, near Santiago. Other articles by the Editor deal with a visit to Selborne, in England, and with the life of the late William Brewster, with whom he was connected by a special tie of affection.

One of the great features of 'Bird-Lore' is the Christmas Bird census. All readers of the Magazine are invited to send to the editor a list of all the species of birds they have been able to identify during a walk or excursion on or about Christmas day. Many returns are sent in from all parts of the United States. In 1919-20 the greatest number of species observed in the northern and eastern Atlantic States were 43, while at Santa Barbara, on the Californian coast, as many as 109 were tabulated. The present writer, who was in America during Christmas 1919, with the help of some kind and sharp-eyed hosts, was able to make a return of 21 species observed on the coast of Long Island.

Other interesting features of 'Bird-Lore' are the seasonal reports from all parts of the States in each number, and the articles on the plumages and migrations of American birds. These last are accompanied by coloured plates in each number. It is a remarkable fact that the European Starling, which is dealt with on p. 213 of volume xxii., was introduced into the United States about 1890, when a number were liberated in New York City, and it has now spread far and wide from Maine to Ohio and Alabama; in some places it has become enormously abundant. We fear it may prove to be as great a nuisance as the Sparrow.

A large part of each number of the Magazine is devoted to the interests of the Audubon Societies, which have been started in every State of the Union for the protection and conservation of bird and animal life, and which are guided and controlled by the National Association of the Audubon Societies in New York.

*The Condor.*

[The Condor: A Magazine of Western Ornithology. Vols. xxi. & xxii. for 1919 & 1920.]

[Second ten-year Index to the 'Condor.' Vols. xi.-xx., 1909-1918. By J. R. Pemberton. Hollywood, California, 1919.]

Readers of the 'Condor' and Members of Cooper Ornithological Club ought to be very grateful to Mr. Pemberton for his most carefully constructed and ingenious Index to the ten volumes of the 'Condor,' from 1909 to 1918. The preparation of it occupied eighteen months of his time, but the result appears to be extremely satisfactory, and all the information contained in the volumes can be referred to at once, without any trouble.

The longest article contained in the two volumes of the 'Condor' under review is that of Mrs. Merriam Bailey on her wanderings in the Dakota Lake region, in which she recounts in a charming style her experiences and observations on the birds of the western prairie region. A new feature of the 'Condor' is a series of autobiographies, the longest and most important of which is that of Mr. H. W. Henshaw, until recently the Chief of the Biological Survey at Washington. In his early days, in the seventies and eighties of the last century, Mr. Henshaw was attached to the United States Geological and Geographical Survey and travelled extensively all over the Western States. It was during these years that he amassed the large collection of American birds which subsequently, through the generosity of the late Mr. Godman, found a home in our Natural History Museum at South Kensington.

The 1919 volume contains, in addition, a number of articles on the nesting-habits of some of the less well-known western birds, generally illustrated by excellent photographs beautifully reproduced. Such are the accounts of the nesting of Townsend's Solitaire (*Myadestes townsendi*) near the snow-line on Mt. Shasta in northern California by Mr. W. L. Dawson, of the Short-eared Owl in Washington State by Mr. E. H. Kitchin, and of the Red Crossbill in British Columbia by Mr. J. H. Munro; Mr. G. Willett,

who was for some time stationed on Laysan Island, an outlier of the Hawaiian Islands, gives us some information on the nesting-habits of two rare Petrels—*Pterodroma hypoleuca* and *Oceanodroma tristrani*.

As showing the effects of untimely weather, Mr. E. R. Warren tells us of the effects of a snow-storm at Colorado Springs on the 5th of May, when eight inches of snow covered the ground and did much damage to the migrants, who were then arriving and passing in great numbers.

An obituary notice of a young collector, Mr. M. P. Anderson, who accidentally met with his death in a ship-yard at Oakland, near San Francisco, in February 1919, where he was patriotically doing war-work, is of interest to English naturalists, as it was Mr. Anderson who was chosen some years ago to conduct the collecting expedition of the Duke of Bedford in eastern Asia, and all the birds and mammals then collected are now in the British Museum.

The volume for 1919 contains descriptions of two new races, both from Lower California, by Mr. H. Oberholser—*Junco oreganus pontilis* and *Pipilo fuscus aripolius*.

The 1920 volume contains three articles of general interest by Mr. A. Wetmore. In the first of these he suggests that the plug of feathers nearly always found in the pyloric diverticulum of the stomach of the Grebes acts as a strainer to prevent the passage of larger particles of bone or fish-scales from the stomach into the intestines. In another paper, as the result of observations on a young Great Blue Heron, he believes that the mysterious powder-down patches in the pelvic and pectoral regions of Herons and some other birds are used by the younger birds to oil and dress the contour feathers of the body, especially as the uropygial gland, often used later in life, develops slowly, and does not become functional till subsequently.

Mr. Wetmore's third article deals with the wing-claw in the Swifts. Out of some 48 species belonging to the genera examined, he found the claw absent only in a few species of *Collocalia*, though often minute and rudimentary, and obviously of no functional importance. In the genus

*Hemiprocne*, usually placed in a distinct family, the wing-claw was not found.

Major Allan Brooks contributes a list of the Wading-birds of southern British Columbia. He believes that no group of birds has been so neglected by western ornithologists, and that there is still much to be learned about them. Mr. Grinnell, the Editor, argues that the life of the sea-birds must be a comparatively safe one, as most of the species only lay one or at the most two eggs, and seldom, if ever, rear a second brood, and if the numbers remain constant it shows that the struggle for existence cannot be very severe.

Mr. Grinnell also describes a new subspecies of Brewer's Blackbird separating those from the Pacific slope from those of eastern North America under the name *Euphagus cyanocephalus minusculus*. Mr. H. Oberholser has a new race of Shore-Lark, *Otocoris alpestris sierræ*, breeding in the Sierra Nevada of California, and Mr. W. P. Taylor a new race of Ptarmigan, *Lagopus leucurus ranierensis*, from Mt. Ranier, in Washington State, where it lives at an elevation of from 6000 to 8000 feet.

### *Fauna och Flora.*

[Fauna och Flora. Populär Tidskrift för Biologi. Utgifven af Einar Lönnberg. Vols. xiv. & xv. for 1919 & 1920, 6 nos. to each vol.]

This excellent magazine, edited by our foreign member, Dr. Lönnberg, deals with zoology and botany in all its aspects, as its title implies; but there is a good proportion of articles on bird-life, chiefly, of course, of local interest, such as rare occurrences and lists of birds of special districts in Sweden. There are also a good many articles of more general interest. Such is the series by Mr. L. G. Andersson containing an account of the travels of Carl Thunberg to South Africa in 1770-1779, an article on bird-psychology by Mr. A. Adlersparre, and several by Dr. Lönnberg himself. Two of these deal with a large collection from Mongolia and north-west China which have recently reached the Stockholm Museum from Mr. P. J. G. Anderson, and another on

the birds of Juan Fernandez and Easter Islands in the south-eastern Pacific. The editor also writes on a Greenfinch × Goldfinch hybrid, and Mr. K. Kolthoff on another between *Dryobates leuconotus* and *D. major*. Mr. S. Bergmann contributes some notes on the birds of Egypt which he made while on his way to Kamchatka to collect for the Stockholm Museum. There is an obituary notice of Prof. J. A. Palmén (1845–1919), that well-known Finnish ornithologist who first drew up a list of the probable flight-lines of migrating birds, and another of Prof. Tycho Tullberg of Upsala, who died at the age of 77 in 1920. His mother was a great grand-daughter of Linnæus. There are portraits with both these articles. It is interesting to note that a Starling marked in Sweden 8 July, 1915, was captured near Middlesbrough in Yorkshire on the 1st of February, 1918.

### *Le Gerfaut.*

[Le Gerfaut. Revue belge d'Ornithologie. Publiée sous la direction de M. Marcel de Contreras. 5e–9e Année 1919 and 10e Année 1920.]

We have now received the complete set of the 'Gerfaut' for 1919 and 1920, the first two numbers of which were noticed in 'The Ibis' for 1919 (p. 782), and must briefly review the rest of the volumes. M. L. Coopman discusses the Pipits, their migrations from eastern Europe and their occurrence in Belgium, especially that of *Anthus cervinus*, and Dr. Mairlot has a good article on the habits of the Yellow Bunting.

In an early number of the magazine, that for May 1912, the first capture of Brünnich's Guillemot in Belgium is recorded. This bird, which was taken at Ostend, turns out to have been a young Razorbill, and the correction will be found on p. 87 of the 1919 volume.

The 1920 volume opens with a portrait and a eulogy of M. Ivan Braconier, a leading Belgian ornithologist, who was unfortunately killed in a motor accident. Another article of interest is a comparison of the birds of Devonshire with those of Belgium by M. Th. Bissehop, who during the German invasion found a home at Torquay. The

absence from Devonshire of the Nightingale, Great Reed-Warbler, Marsh-Warbler, Icterine Warbler, Crested Tit, Shore-Lark, Ortolan Bunting, Tree-Sparrow, and Hazel Hen, all more or less abundant in Belgium, is noted.

M. A. Paque records the occurrence for the first time of *Branta ruficollis* in Belgium. It was taken on the Scheldt, near Antwerp, on 3 December, 1919, and is figured in a coloured plate. Another rare bird found nesting recently in Belgium is the Great Black Woodpecker. No satisfactory record of the occurrence of this bird in the British Islands is known.

There are a number of other useful and interesting contributions dealing with the avifauna of Belgium in its varied aspects, and we hope that the 'Gerfaut' is now firmly established and will continue to prosper.

#### *Irish Naturalist.*

[The Irish Naturalist: A monthly Journal on General Irish Natural History. Vols. xxviii. & xxix. for 1919 & 1920.]

There are not very many articles dealing with ornithological topics in the last two volumes of the 'Irish Naturalist.' Perhaps the most interesting and novel is that of Mr. J. P. Burkitt on the so-called "cocks' nests" of the Wren. From careful observations carried out by the author he concludes that the several nests are built by the male alone before the arrival of the female, and that the male during this period of anticipation keeps in touch with all the nests, roosting in them at night. On the arrival of the female, and until the young birds are out of the nest, the male takes little interest in his family. Some of these observations are controverted by Mr. E. P. Butterfield, who is familiar with the Wrens in Yorkshire, where their habits may be somewhat different. In another article Mr. Burkitt deals with the question of the length of the song-period of certain Warblers. He believes that song ceases as soon as incubation begins, and that all the later singing males are mateless.

Mr. Moffat's address to the Dublin Field Naturalists'

Club, printed in the May 1920 number of the journal, deals with colours of birds in relation to their habits. He suggests that the conspicuous white rump and wing-patches of many birds are useful as a signal of alarm and danger.

A new bird to the Irish list is the Carolina Crake or Sora Rail (*Porzana carolina*), an example of which struck the lantern of the lighthouse at Slyne Head, co. Galway, on 11 April, 1920, and is recorded by Prof. C. J. Patten in the June 1920 number.

According to the B. O. U. List there are four British records—one for England, one for Wales, and two for Scotland—of this North American bird.

#### *Scottish Naturalist.*

[The *Scottish Naturalist*: A monthly Magazine devoted to Zoology. 1920; 6 nos.]

The 'Scottish Naturalist,' under the able editorship of our ex-President, continues to flourish so far as its contents are concerned, though somewhat reduced in size, and now appearing only every two months owing to the increased cost of production.

The principal ornithological contributors to the present volume are the Misses Baxter and Rintoul, whose report on Scottish Ornithology for 1917 occupies the whole of the July-August number. This is a most valuable piece of work, most carefully and clearly carried out. The most important ornithological occurrence during the year is the breeding of the Whooper Swan, an event which has taken place during the last two years in west Perthshire. It formerly nested in Orkney, but has not been proved to have bred previously on the mainland. The Misses Baxter and Rintoul have also commenced a series of articles on the breeding species of Scottish Ducks, and have dealt in the present volume with three species—the Gadwall, Wigeon, and Shoveler. They also record the occurrence of the American Wigeon or Baldpate in Fife, while Mr. J. A. Anderson has observed it in Stirlingshire, and with his

notice sends a delicate sketch from life of the Common and American species swimming together in one flock.

Several contributors notice the increase in numbers and in breeding-range of the Great Crested Grebe in Scotland. Mr. Donald Guthrie concludes his notes on the birds of South Uist, and Mr. William Evans gives a list of the breeding-places of the Black-headed Gull in the Forth area, one of which in Midlothian according to evidence in his possession has been occupied since the eighteenth century.

Another contribution from Dr. Eagle Clarke tells us of a surprising account of the attempted nesting of a pair of Bee-eaters in Midlothian. Though occurring not infrequently in the south of England, it has never yet been known to have nested, although it would probably do so if unmolested.

Another new record is that of Catherine and T. E. Hodgkin, who found a nest of the Brambling in Sutherland in May last. The late Mr. E. T. Booth stated that he had found a nest in Perthshire in 1866, but the record has always been looked on as doubtful.

Altogether the volume of the 'Scottish Naturalist' for last year is full of interesting matter, not only in ornithology but in other departments of natural history, and we hope that the appeal of the editor for more subscribers and additional funds to carry on the magazine will meet with the response which it deserves.

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*List of other Ornithological Publications received.*

- BANGS, O. and PENARD, T. E. Notes on American Birds. (Bull. Mus. Comp. Zool. lxiv. pp. 365-397.)
- CHAPMAN, F. M. Descriptions of apparently new Birds from Bolivia, &c. (Amer. Mus. Novitates, no. 2.)
- [COURTOIS, R. P.] Les Oiseaux du Musée de Zi-ka-wei. (Mém. concern. l'hist. nat. de l'Empire Chinois, v. pt. 3, fasc. 1-4.)
- GRINNELL, J. The Californian race of the Brewer Blackbird. The existence of sea-birds a relatively safe one. (Condor, xxii, pp. 101-103, 152-155.)



- GRISCOM, L. Notes on the winter birds of San Antonio, Texas. (*Auk*, xxxvii, pp. 49-55.)
- GRISCOM, L. and NICHOLS, J. T. A revision of the Seaside Sparrows. (Abstr. Proc. Linn. Soc. New York, no. 32, pp. 18-30.)
- GURNEY, J. H. Early Annals of Ornithology. Pp. 1-240, many illustr. London, 1921. 8vo.
- GURNEY, J. H. Presidential Address, Norfolk and Norwich Nat. Soc., 1920. (Trans. Norf. Norw. Nat. Soc. xi, pp. 1-22.)
- HARTERT, E. Types of Birds in the Tring Museum. (Novit. Zool. xxvi, pp. 123-178; xxvii, pp. 425-505.)
- KURODA, N. Descriptions of three new forms of Birds from Japan and Formosa. (Dobuts. Zasshi, xxxii, pp. 243-248.)
- MATHEWS, G. M. The Birds of Australia. (Vol. xi, pt. 1.)
- OBERHOLSER, H. C. Collection of 44 papers reprinted from various journals.
- SAUNDERS, A. A. A distributional list of the Birds of Montana. (Pacific Coast Avifauna, no. 14.)
- SWARTH, H. S. Birds of the Papago Saguaro National Monument and the neighbouring region, Arizona. Pp. 1-63. Washington (Nat. Park Service), 1920.
- SWARTH, H. S. In Memoriam: Frank Slater Daggett. (*Condor*, xxii, pp. 129-135.)
- TODD, W. E. C. Descriptions of apparently new South American Birds. (Proc. Biol. Soc. Wash. vol. xxxiii, pp. 71-76.)
- TODD, W. E. C. A revision of the genus *Eupsychortyx*. (*Auk*, xxxvii, pp. 189-220, pls. v., vi.)
- TOWNSEND, C. W. Supplement to the Birds of Essex County, Massachusetts. (Mem. Nuttall Orn. Club, no. v.)
- WITHERBY, H. F. and others. A Practical Handbook of British Birds. (Pt. x.)
- Audubon Bulletin*. (Fall, 1920.)
- Auk*. (Vol. xxxviii, no. 1.)
- Australian Avian Record*. (Vol. iv, nos. 4, 5.)
- Avicultural Magazine*. (Vol. xii, nos. 1, 2.)
- Bird-Lore*. (Vol. xxiii, no. 1.)
- Bird Notes*. (Vol. iv, nos. 1, 2.)
- British Birds*. (Vol. xiv, nos. 8-10.)
- Bull. Essex County Ornith. Club*. (1919 & 1920.)
- Canadian Field Naturalist*. (Vol. xxxiv, nos. 6, 7.)
- Cassinia* (for 1920.)
- Condor*. (Vol. xxiii, no. 1.)
- Emu*. (Vol. xx, no. 3.)
- Fauna och Flora*. (1921, pt. 1.)
- Hornero*. (Vol. ii, no. 2.)

- Irish Naturalist. (Vol. xxx. nos. 1-3.)  
 Journal of the Bombay Nat. Hist. Soc. (Vol. xxvii. no. 2.)  
 Journal of the Federated Malay States Museum. (Vol. x. no. 2.)  
 Journal of the Natural History Society of Siam. (Vol. iii. no. 5.)  
 Journal für Ornithologie. (Vol. 69, no. 1.)  
 Oologists' Record. (Vol. i. no. 1.)  
 Ornithologische Monatsberichte. (Vol. 29, nos. 1/2, 3/4.)  
 Revue Française d'Ornithologie. (Nos. 140-143.)  
 Revue d'Histoire naturelle appliquée. L'Oiseau. (Vol. i. no. 12; vol. ii. nos. 1, 2.)  
 Scottish Naturalist. (1921, nos. 109, 110.)  
 South African Journal of Natural History. (Vol. ii. no. 2.)  
 South Australian Ornithologist. (Vol. v. no. 4.)  
 Tori. (Vol. ii. no. 10.)  
 Verhandl. Orn. Ges. Bayern. (Vol. xiv. pt. 4.)
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## XX.—*Letters, Extracts, and Notes.*

### The Last Phase of the Subspecies.

SIR,—The interesting letter from Mr. Loomis in the October number of 'The Ibis' will be welcomed by many ornithologists on this side of the Atlantic, and not least by some of those who might be termed "subspecies" men.

It seems to us that up to the present the excuse—in fact, the necessity—for trinomialism lies in the fact that binomial names, and consequent recognition of complete specific distinction, had been conferred on many mere geographical variations. The trinomialist then arrived on the scene, and did much good by reducing such geographical forms to their true position as races, or mere climatic variations, of one species. He also named and continues to name other races, which he considers as distinct as those which have names already.

Now, even those who oppose all trinomialism will agree that, as the species is the only definite minor unit in nature, any system which enables us at a glance to appreciate properly the true specific relationship of a form whose rank as a distinct species had previously been misconceived, would